Serial No. 10/014,509 Docket No. 383684/00

#### **AMENDMENTS TO THE CLAIMS:**

# 1-3. (Canceled)

`,

- 4. (Previously presented) A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes,

wherein said plurality of protrusions comprises a rod-shaped spacer extending between said first and second substrates.

- 5. (Currently amended) The device as claimed in claim 4, further comprising:
  - A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed;
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes; and

at least one interposing layer formed between said plurality of protrusions and said second substrate.

- 6. (Canceled)
- 7. (Previously presented) A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being

positioned at a substantially central portion of a corresponding one of said pixel electrodes, wherein said protrusions comprise an isotropic material and a black material.

- 8. (Previously presented) A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed;
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes; and

a light-shielding layer formed on said protrusions, to inhibit a leakage of light through said liquid crystal layer.

### 9-10. (Canceled)

- 11. (Previously presented) A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes,

wherein said opposing electrode comprises a plurality of stripe-shaped electrodes formed perpendicularly to said plurality of pixel electrodes, an intersection of a pixel electrode in said plurality of pixel electrodes and a stripe-shaped electrode in said plurality of stripe-shaped electrodes, defining a pixel of said liquid crystal display device.

- 12. (Previously presented) The device as claimed in claim 11, wherein an electric field formed in said liquid crystal layer between said pixel electrode and a corresponding one of said opposing electrodes is tilted toward a center of said pixel.
- 13. (Previously presented) The device as claimed in claim 12, wherein said electric field

Docket No. 383684/00

causes molecules of said liquid crystal layer to be symmetrically oriented toward center of said pixel.

## 14. (Canceled)

- 15. (Currently amended) The device as claimed in claim 4,
  - A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes,

wherein said pixel electrodes comprise notches formed on peripheral portions of said pixel electrodes.

# 16. (Canceled)

- 17. (Previously presented) A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
- a liquid crystal layer sandwiched between said first and second substrates, said second substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes,

wherein said pixel electrodes comprise electrode-free portions extending radially outward from centers of said pixel electrodes.

- 18. (Currently amended) The device as claimed in claim 4,
  - A liquid crystal display device, comprising:
  - a first substrate on which a plurality of pixel electrodes are formed;
  - a second substrate on which an opposing electrode is formed; and
  - a liquid crystal layer sandwiched between said first and second substrates, said second

substrate further having thereon a plurality of protrusions, each of said protrusions being positioned at a substantially central portion of a corresponding one of said pixel electrodes,

wherein said pixel electrodes comprise concave portions extending radially outward from centers of said pixel electrodes.

19-20. (Canceled)